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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,502	04/25/2005	Lars Persson	270600US6PCT	6854
22850	7590	09/18/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			WALBERG, TERESA J	
		ART UNIT		PAPER NUMBER
				3753

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/532,502	PERSONN, LARS	
	<b>Examiner</b>	<b>Art Unit</b>	
	Teresa J. Walberg	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 11-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 April 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/20/05, 7/20/05, 4/25/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it should not contain phrases such as "the present invention refers to" and "according to the invention" and it should not contain legal phraseology such as "comprises" and "means". Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedman et al (5,184,673).

Hedman et al disclose a heat exchanger as claimed including plates (2a and 2b in Fig. 3) with a pattern of grooves (shown in Fig. 2c and Fig. 3) and connections for inlets and outlets (at 8), wherein the apparatus could have been made by being placed in a pack and brazed (col. 1, lines 21-23), separate channels for two media being provided between alternating pairs of plates (Fig. 4), a set of holes (2a3 in Fig. 2c) arranged through the plates around the connections (see Fig. 3) and at least one reinforcement mechanism (13 in Fig. 3) arranged through the holes, brazings (11) arranged to seal off the holes towards the channels and the holes being arranged in rotational symmetry through the plates with regard to a 180 degree rotation (Fig. 3).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedman et al (5,184,673).

Hedman et al disclose a heat exchanger as claimed with the exception of the number of plates being used, the plates being arranged in a pack, and a plurality of packs of plates being connected together. However, it would have been obvious to one of ordinary skill in the art to use any suitable number of

plates in a heat exchanger based on the intended use of the device, and to assemble the plates in groups which are then fastened together in order to more efficiently manufacture devices of different sizes.

7. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedman et al (5,184,673) in view of Loebel (3,532,161).

Hedman et al disclose a heat exchanger as claimed with the exception of the reinforcement mechanism comprising a threaded rod with stops on each end. However, Loebel discloses a plate type heat exchanger with the plates secured in place by use of rods (18 in Fig. 3), having stops on each end (see Fig. 3) and being threaded (see Fig. 3). It would have been obvious to one of ordinary skill in the art in view of Loebel to use threaded rods with the heat exchanger of Hedman et al, the motivation being to more easily secure the parts together in the proper position.

It is noted that the first page of patent document 3,532,161 appears to list the inventor's name as "Loekel", however the official records of the USPTO list the last name as "Loebel", as is shown in the signature on the second page of the document.

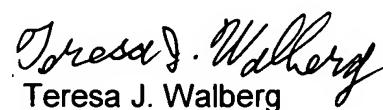
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haber, Carnahan, Carey, and Fouts et al are cited to show assembly structure for heat exchangers.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Teresa J. Walberg  
Primary Examiner  
Art Unit 3753

tjw